This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A magnetic head including a read head element, comprising:

a pinned magnetic layer;

a free magnetic layer having a central portion thereof having a free magnetization therewithin;

a magnetic bias layer, including a central portion thereof that is disposed across said central portion of said free magnetic layer;

said central portion of said bias layer being comprised of a material having an approximately zero magnetic moment;

a pair of electrical leads being disposed above said bias layer and on opposite sides of said central portion of said bias layer;

a barrier layer being disposed across said central portion of said bias layer, wherein said barrier layer is disposed only upon said central portions of said bias layer and upon said electrical leads.

2. (original): A magnetic head as described in claim 1 wherein said central portion of said bias layer is comprised of an oxidized material, and said barrier layer is comprised of a material that is a barrier to oxygen diffusion from said central portion of said bias layer.

3. (original): A magnetic head as described in claim 2, further including a thin spacer layer that is disposed upon said free magnetic layer, wherein said bias layer is disposed upon said thin spacer layer and said barrier layer is deposed upon said bias layer.

4. (original): A magnetic head as described in claim 3 wherein said barrier layer is comprised of a material that has low electrical conductivity.

5. (original): A magnetic head as described in claim 4 wherein said barrier layer is comprised of Ru or Rh.

6. (original): A magnetic head as described in claim 5 wherein said barrier layer is comprised of Ru having a thickness of from approximately 5 Å to approximately 40 Å.

7. (original): A magnetic head as described in claim 6 wherein said barrier layer has a thickness of approximately 20 Å.

8. (original): A magnetic head as described in claim 3 wherein said thin spacer layer is comprised of a material that is a barrier to oxygen diffusion.

9. (original): A magnetic head as described in claim 8 wherein said thin spacer layer is comprised of Ru.

10. (currently amended): A hard disk drive including a magnetic head including a read head element, comprising:

a pinned magnetic layer;

a free magnetic layer having a central portion thereof having a free magnetization therewithin;

a magnetic bias layer, including a central portion thereof that is disposed across said central portion of said free magnetic layer;

said central portion of said bias layer being comprised of a material having an approximately zero magnetic moment;

a pair of electrical leads being disposed above said bias layer and on opposite sides of said central portion of said bias layer;

a barrier layer being disposed across said central portion of said bias layer, wherein said barrier layer is disposed only upon said central portions of said bias layer and upon said electrical leads.

11. (original): A magnetic head as described in claim 10 wherein said central portion of said bias layer is comprised of an oxidized material, and said barrier layer is comprised of a material that is a barrier to oxygen diffusion from said central portion of said bias layer.

12. (original): A magnetic head as described in claim 11, further including a thin spacer layer that is disposed upon said free magnetic layer, wherein said bias layer is disposed upon said thin spacer layer and said barrier layer is deposed upon said bias layer.

13. (original): A magnetic head as described in claim 12 wherein said barrier layer is comprised of a material that has low electrical conductivity.

14. (original): A magnetic head as described in claim 13 wherein said barrier layer is comprised of Ru or Rh.

15. (original): A magnetic head as described in claim 14 wherein said barrier layer is comprised of Ru having a thickness of from approximately 5 Å to approximately 40 Å.

16. (original): A magnetic head as described in claim 15 wherein said barrier layer has a thickness of approximately 20 Å.

17. (original): A magnetic head as described in claim 12 wherein said thin spacer layer is comprised of a material that is a barrier to oxygen diffusion.

18. (original): A magnetic head as described in claim 17 wherein said thin spacer layer is comprised of Ru.

19. (currently amended): A method for fabricating a magnetic head, comprising:

fabricating a free magnetic layer;

fabricating a magnetic bias layer across said free magnetic layer;

fabricating electrical leads above portions of said bias layer;

oxidizing a central portion of said bias layer;

depositing an oxygen diffusion barrier layer upon said oxidized central portion of said bias layer and upon said electrical leads; and

removing portions of said barrier layer that are deposited at locations other than upon said electrical leads and upon said central portions of said bias layer.

20 (original): A method for fabricating a magnetic head as described in claim 19 wherein said barrier layer is comprised of Ru or Rh.

21. (original): A method for fabricating a magnetic head as described in claim 20 wherein said barrier layer is comprised of Ru and has a thickness of from approximately 5 Å to approximately 40 Å.

22. (original): A method for fabricating a magnetic head as described in claim 21 wherein said barrier layer is formed with a thickness of approximately 20 Å.